



## GARDEN NOTES

# RASPBERRIES, WHAT'S EATING THEM BESIDES YOU?

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If you've noticed dieback or wilting tips of raspberry canes, don't rush to add more water - insects may be infesting your raspberry bed.

There are three main insects that attack raspberry canes in Utah, says Diane Alston, Utah State University Extension entomologist. The most prevalent insect infesting raspberries in northern Utah currently is the raspberry horntail.

The raspberry horntail is a wood-boring wasp, Alston says. It will attack raspberry, blackberry, other related brambles and roses. Injury is usually confined to first-year, vegetative canes. Horntail larvae (immature stage) are white, cylindrical with dark brown heads and a pointy tail with a spine.

In northern Utah, wilting cane tips become noticeable in June and July as larvae bore through the center pith, which becomes soft, she explains. It's easy to verify the insect's presence by cutting open wilted canes to check for larvae inside.

"Prune and destroy infested canes when wilting becomes apparent; this will remove the larvae and reduce the population," she says. "There is a parasitic wasp that attacks horntail larvae and helps reduce populations, but not before some injury has occurred. The smaller parasitic larvae can be seen crawling on horntail larvae."

To control horntail eggs and young larvae in the spring, treat canes with a full cover spray of insecticide when new growth begins, Alston says. Carbaryl (Sevin), diazinon, malathion and rotenone are effective insecticides. A repeat application can be made seven to 14 days later if populations are high. Do not treat with insecticides just before or during bloom to avoid harming pollinators.

Two other insects that attack raspberry canes are the rose stem girdler, a flat-headed beetle, and the raspberry crown borer, a clear-winged moth, she says. Stem girdler larvae form two to five spiral grooves in the cambium (just under the bark), girdling the canes and causing wilt and death. First-year canes are attacked more than fruiting canes. Girdling in first-year canes produces a gall-like swelling. Larvae are white, slightly flattened and have two short, brown toothed projections on the tail end.

Raspberry crown borers have a two-year life cycle, Alston explains. The first indication

of injury is wilting and dying of foliage on first-year canes in April through June. Infested cane tips may curl into a shepherd's crook shape. Damaged canes become spindly, may break at ground level and may be predisposed to winter injury. Larvae overwinter in the crown and tunnel upward the second year. Adult moths emerge in summer to fall, leaving pupal skins attached to emergence holes in canes.

“Pruning is helpful to reduce infestations of all three raspberry insects,” she says. “Prune canes below the insect and destroy (burn, bury at least two inches deep or dispose in the landfill). Remove the entire cane if infested with crown borer. If infestation is substantial, pruning should be supplemented with chemical control. The insecticides listed for the horntail are effective for these other insects as well. Timing for cane girdler is also the same as for the horntail.”

For the crown borer, however, first-year larvae can be killed in the fall (mid-October) as they crawl down canes to overwinter in crowns or the following spring when they become active (April to May), Alston says. Apply a full cane spray and drench to the base of plants to allow the insecticide to soak into the root zone. Treatments must be applied for at least two or more consecutive years for successful control of crown borer.

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